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EXAMINER

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/633,764
Filing Date: August 04, 2003
Appellant(s): CHANG ET AL.

Anna M. Budde
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/1/08 appealing from the Office action mailed 2/4/08.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

The amendment after final rejection filed on 4/21/08 has been entered.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6403231

Mueller et al.

6-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonk et al. (US 6082025) in view of Mueller et al. (US 6403231).

Bonk discloses articles, such as balls and shoes, made from laminate barrier membranes and permanently sealed inflatable bladders formed from them (column 1, lines 16-40). The articles have ethylene vinyl alcohol copolymer barrier layers (column 11, line 64 through column 12, line 23) bonded to thermoplastic polyurethane elastomer layers (column 7, lines 31-62) and the bladders are inflated with nitrogen (column 1, lines 4-13), said membrane includes alternating microlayers of thermoplastic polyurethane elastomer and EVOH copolymer barrier material, wherein the number of layers is from 10 to 1000 (column 7, lines 1-62, column 11, line 64 through column 12, line 23) and wherein the thickness of the individual layers is up to about 2.5 microns (column 7, lines 19-30).

Bonk fails to disclose a laminar nano-filler having an average particle platelet thickness of up to about 10 nanometer, an average aspect ratio of at least about 200,

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and at least one of height and width being independently from about 0.1 to about 1.5 wherein the nano-filler does not appreciably decrease the resilience of the membrane.

Mueller discloses a laminar montmorillonite nano-filler having an average particle platelet thickness of up to about 10 nanometer, an average aspect ratio of at least about 200 (column 3, lines 30-44 and column 5, lines 31-35, column 7, lines 15-21), and at least one of height and width being independently from about 0.1 to about 1.5 (column 3, lines 30-44) wherein the nano-filler does not appreciably decrease the resilience of the membrane (column 6, lines 41-54, since the films are flexible) in an EVOH barrier layer (column 4, lines 19-20, column 5, lines 3-4) for the purpose of providing improved gas barrier properties (column 3, lines 1-19).

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided a laminar nano-filler having an average particle platelet thickness of up to about 10 nanometer, an average aspect ratio of at least about 200, and at least one of height and width being independently from about 0.1 to about 1.5 wherein the nano-filler does not appreciably decrease the resilience of the membrane in the EVOH layer of Bonk in order to provide improved gas barrier properties as taught or suggested by Mueller.

Claims 28 and 30-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonk et al. (US 6082025) in view of Mueller et al. (US 6403231).

Bonk discloses articles, such as balls and shoes, made from laminate barrier membranes and permanently sealed inflatable bladders formed from them (column 1,

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lines 16-40). The articles have ethylene vinyl alcohol copolymer barrier layers (column 11, line 64 through column 12, line 23) bonded to thermoplastic polyurethane elastomer layers (column 7, lines 31-62) and the bladders are inflated with nitrogen (column 1, lines 4-13), said membrane includes alternating microlayers of thermoplastic polyurethane elastomer and EVOH copolymer barrier material, wherein the number of layers is from 10 to 1000 (column 7, lines 1-62, column 11, line 64 through column 12, line 23).

Bonk fails to disclose a laminar nano-filler having an average particle platelet thickness of up to about 10 nanometer, an average aspect ratio of at least about 200, and at least one of height and width being independently from about 0.1 to about 1.5 wherein the nano-filler does not appreciably decrease the resilience of the membrane.

Mueller discloses a laminar montmorillonite nano-filler having an average particle platelet thickness of up to about 10 nanometer, an average aspect ratio of at least about 200 (column 3, lines 30-44 and column 5, lines 31-35, column 7, lines 15-21), and at least one of height and width being independently from about 0.1 to about 1.5 (column 3, lines 30-44) wherein the nano-filler does not appreciably decrease the resilience of the membrane (column 6, lines 41-54, since the films are flexible) in an EVOH barrier layer (column 4, lines 19-20, column 5, lines 3-4) for the purpose of providing improved gas barrier properties (column 3, lines 1-19).

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided a laminar nano-filler having an average particle platelet thickness of up to about 10 nanometer, an average aspect ratio

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of at least about 200, and at least one of height and width being independently from about 0.1 to about 1.5 wherein the nano-filler does not appreciably decrease the resilience of the membrane in the EVOH layer of Bonk in order to provide improved gas barrier properties as taught or suggested by Mueller.

(10) Response to Argument

Appellant has argued that Mueller teaches away from Bonk because Mueller discloses that, as one benefit, the stiffness of its laminate sheet is increased with added filler (appellant cites col. 6, lines 33-40 and Example 18, columns 13-14). However, column 6, lines 33-40 of Mueller does not specifically state that the stiffness of the laminate is increased with added filler. In fact Mueller, column 6, lines 41-54, indicates that embrittlement is to be avoided. Appellant points to one lone example, example 18, as providing improved stiffness. While example 18 of Mueller does disclose improved stiffness, example 18 is for a monolayer as opposed to the multilayered constructions of examples 1-3, 5-17 and 19-22, Bonk and the claimed invention. It is to be noted that none of the other 21 examples provide improved stiffness but do provide improved gas barrier properties.

Appellant argues that while Mueller discloses that its films are flexible, resiliency and flexibility are not the same thing. However, Bonk discloses resilient membranes (column 5, lines 10-17). Applicant equates the flexibility of Mueller to the flexibility of aluminum and paper which are flexible but not resilient. However, the materials of Mueller are not aluminum or paper. Mueller discloses plastics such as polyolefins and

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ethylene vinyl alcohol (EVA, column 6, lines 25-33). Plastics such as these are resilient at room temperature and are the same materials claimed by applicant (see instant claims 4 and 7).

Appellant has argued that a diameter is neither a height nor a width. However diameter is a the maximum distance of an article along the longitudinal axis, width is also the maximum distance of an article along the longitudinal axis. Applicant does not claim any specific shape for the claimed laminar nano-filler and therefore, in this particular case, the diameter is equivalent to the width of the laminar nano-filler because both width and diameter are the maximum distance of an article along the longitudinal axis.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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